Recursive Least-Squares Backpropagation Algorithm For Stop-And-Go Decision-Directed Blind Equalization

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Summary

Stop-and-go decision-directed (S&G-DD) equalization is the most primitive blind equalization (BE) method for the cancelling of intersymbol-interference in data communication systems. Recently, this scheme has been applied to complex-valued multilayer feedforward neural network, giving robust results with a lower mean-square error at the expense of slow convergence. To overcome this problem, in this work, a fast converging recursive least squares (RLS)-based complex-valued backpropagation learning algorithm is derived for S&G-DD blind equalization. Simulation results show the effectiveness of the proposed algorithm in terms of initial convergence.